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Code of Federal Regulation

21

Parts 170 to 199
Revised as of April 1, 2001

Food and Drugs

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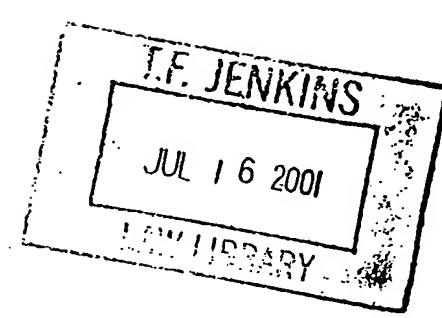


EXHIBIT B

petition (or within 180 days if the time is extended as provided for in section 409(c)(2) of the Act), a regulation prescribing the conditions under which the food additive may be safely used (including, but not limited to, specifications as to the particular food or classes of food in or on which such additive may be used, the maximum quantity that may be used or permitted to remain in or on such food, the manner in which such additive may be added to or used in or on such food, and any directions or other labeling or packaging requirements for such additive deemed necessary by him to assure the safety of such use); and prior to the forwarding of the order to the FEDERAL REGISTER for publication shall notify the petitioner of such order and the reasons for such action; or by order deny the petition, and shall notify the petitioner of such order and of the reasons for such action.

(b) The regulation shall describe the conditions under which the substance may be safely used in any meat product, meat food product, or poultry product subject to the Federal Meat Inspection Act (FMIA) (21 U.S.C. 601 *et seq.*) or the Poultry Products Inspection Act (PPIA) (21 U.S.C. 451 *et seq.*).

(c) If the Commissioner determines that additional time is needed to study and investigate the petition, he shall by written notice to the petitioner extend the 90-day period for not more than 180 days after the filing of the petition.

[42 FR 14489, Mar. 15, 1977, as amended at 65 FR 51763, Aug. 25, 2000]

§ 171.102 Effective date of regulation.

A regulation published in accordance with § 171.100(a) shall become effective upon publication in the FEDERAL REGISTER.

§ 171.110 Procedure for objections and hearings.

Objections and hearings relating to food additive regulations under section 409 (c), (d), or (h) of the Act shall be governed by part 12 of this chapter.

[42 FR 14491, Mar. 15, 1977, as amended at 42 FR 15674, Mar. 22, 1977]

§ 171.130 Procedure for amending, repealing tolerances or exemptions from tolerances.

(a) The Commissioner, on his initiative or on the petition of any interested person, pursuant to part 12 of this chapter, may propose the issuance of a regulation amending or repealing a regulation pertaining to a food additive or granting or repealing an exemption for such additive.

(b) Any such petition shall include an assertion of facts, supported by data, showing that new information exists with respect to the food additive, that new uses have been developed, old uses abandoned, that new data are available as to toxicity or the chemical, or that experience with the existing regulation or exemption may justify its amendment or repeal. New data shall be furnished in the form specified in §§ 171.1 and 171.100 for submitting petitions.

[42 FR 14491, Mar. 15, 1977, as amended at 42 FR 15674, Mar. 22, 1977]

PART 172—FOOD ADDITIVES PERMITTED FOR DIRECT ADDITION TO FOOD FOR HUMAN CONSUMPTION

Subpart A—General Provisions

Sec.

172.5 General provisions for direct food additives.

Subpart B—Food Preservatives

172.105	Anoxomer.	1
172.110	BHA.	1
172.115	BHT.	1
172.120	Calcium disodium EDTA.	1
172.130	Dehydroacetic acid.	1
172.133	Dimethyl dicarbonate.	1
172.135	Disodium EDTA.	1
172.140	Ethoxyquin.	1
172.145	Heptylparaben.	1
172.150	4-Hydroxymethyl-2,6-di- <i>tert</i> -butylphenol.	1
172.155	Natamycin (pimaricin).	1
172.160	Potassium nitrate.	1
172.165	Quaternary ammonium chloride combination.	1
172.170	Sodium nitrate.	1
172.175	Sodium nitrite.	1
172.177	Sodium nitrite used in processing smoked chub.	1
172.180	Stannous chloride.	1
172.185	TBHQ.	1
172.190	THBP.	1

Food and Drug Administration, HHS

Pt. 172

Subpart C—Coatings, Films and Related Substances

- 172.210 Coatings on fresh citrus fruit.
- 172.215 Coumarone-indene resin.
- 172.225 Methyl and ethyl esters of fatty acids produced from edible fats and oils.
- 172.230 Microcapsules for flavoring substances.
- 172.235 Morpholine.
- 172.250 Petroleum naphtha.
- 172.255 Polyacrylamide.
- 172.260 Oxidized polyethylene.
- 172.270 Sulfated butyl oleate.
- 172.275 Synthetic paraffin and succinic derivatives.
- 172.280 Terpene resin.

Subpart D—Special Dietary and Nutritional Additives

- 172.310 Aluminum nicotinate.
- 172.315 Nicotinamide-ascorbic acid complex.
- 172.320 Amino acids.
- 172.325 Bakers yeast protein.
- 172.330 Calcium pantothenate, calcium chloride double salt.
- 172.335 D-Pantothenamide.
- 172.340 Fish protein isolate.
- 172.345 Folic acid (folacin).
- 172.350 Fumaric acid and salts of fumaric acid.
- 172.365 Kelp.
- 172.370 Iron-choline citrate complex.
- 172.372 N-Acetyl-L-methionine.
- 172.375 Potassium iodide.
- 172.385 Whole fish protein concentrate.
- 172.395 Xylitol.
- 172.399 Zinc methionine sulfate.

Subpart E—Anticaking Agents

- 172.410 Calcium silicate.
- 172.430 Iron ammonium citrate.
- 172.480 Silicon dioxide.
- 172.490 Yellow prussiate of soda.

Subpart F—Flavoring Agents and Related Substances

- 172.510 Natural flavoring substances and natural substances used in conjunction with flavors.
- 172.515 Synthetic flavoring substances and adjuvants.
- 172.520 Cocoa with dioctyl sodium sulfosuccinate for manufacturing.
- 172.530 Disodium guanylate.
- 172.535 Disodium inosinate.
- 172.540 DL-Alanine.
- 172.560 Modified hop extract.
- 172.575 Quinine.
- 172.580 Saffrole-free extract of saffras.
- 172.585 Sugar beet extract flavor base.
- 172.590 Yeast-malt sprout extract.

Subpart G—Gums, Chewing Gum Bases and Related Substances

- 172.610 Arabinogalactan.
- 172.615 Chewing gum base.
- 172.620 Carrageenan.
- 172.623 Carrageenan with polysorbate 80.
- 172.626 Salts of carrageenan.
- 172.655 Furcelleran.
- 172.660 Salts of furcelleran.
- 172.665 Gellan gum.
- 172.695 Xanthan gum.

Subpart H—Other Specific Usage Additives

- 172.710 Adjuvants for pesticide use dilutions.
- 172.712 1,3-Butylene glycol.
- 172.715 Calcium lignosulfonate.
- 172.720 Calcium lactobionate.
- 172.723 Epoxidized soybean oil.
- 172.725 Gibberellic acid and its potassium salt.
- 172.730 Potassium bromate.
- 172.735 Glycerol ester of wood rosin.
- 172.755 Stearyl monoglyceridyl citrate.
- 172.765 Succistearin (stearyl propylene glycol hydrogen succinate).
- 172.770 Ethylene oxide polymer.
- 172.775 Methacrylic acid-divinylbenzene copolymer.

Subpart I—Multipurpose Additives

- 172.800 Acesulfame potassium.
- 172.802 Acetone peroxides.
- 172.804 Aspartame.
- 172.806 Azodicarbonamide.
- 172.808 Copolymer condensates of ethylene oxide and propylene oxide.
- 172.809 Curdlan.
- 172.810 Dioctyl sodium sulfosuccinate.
- 172.811 Glyceryl tristearate.
- 172.812 Glycine.
- 172.814 Hydroxylated lecithin.
- 172.816 Methyl glucoside-coconut oil ester.
- 172.818 Oxytetrin.
- 172.820 Polyethylene glycol (mean molecular weight 200-9,500).
- 172.822 Sodium lauryl sulfate.
- 172.824 Sodium mono- and dimethyl naphthalene sulfonates.
- 172.826 Sodium stearyl fumarate.
- 172.828 Acetylated monoglycerides.
- 172.830 Succinylated monoglycerides.
- 172.831 Sucralose.
- 172.832 Monoglyceride citrate.
- 172.833 Sucrose acetate isobutyrate (SAIB).
- 172.834 Ethoxylated mono- and diglycerides.
- 172.836 Polysorbate 60.
- 172.838 Polysorbate 65.
- 172.840 Polysorbate 80.
- 172.841 Polydextrose.
- 172.842 Sorbitan monostearate.
- 172.844 Calcium stearyl-2-lactylate.
- 172.846 Sodium stearyl lactylate.
- 172.848 Lactylic esters of fatty acids.

Common name	Scientific name	Limitations
Sandalwood, white (yellow, or East Indian) ... Sandarac	<i>Santalum album</i> L. <i>Tetradlepis articulata</i> (Vahl), Mast	In alcoholic beverages only
Sarsaparilla	<i>Smilax aristolochiaefolia</i> Mill. (Mexican sarsaparilla), <i>S. regelii</i> Killip et Morton (Honduras sarsaparilla), <i>S. febrifuga</i> Kunth (Ecuadorian sarsaparilla), or undetermined <i>Smilax</i> spp. (Ecuadorian or Central American sarsaparilla).	
Sassafras leaves	<i>Sassafras albidum</i> (Nutt.) Nees	Safrole free
Senna, Alexandria	<i>Cassia acutifolia</i> Delile.	
Serpentaria (Virginia snake-root)	<i>Aristolochia serpentaria</i> L.	In alcoholic beverages only
Simaruba bark	<i>Simaruba amara</i> Aubl.	Do.
Snake-root, Canadian (wild ginger)	<i>Asarum canadense</i> L.	
Spruce needles and twigs	<i>Picea glauca</i> (Mill.) B.S.P. or <i>P. mariana</i> (Mill.) B.S.P.	
Storax (styrax)	<i>Liquidambar orientalis</i> Mill. or <i>L. styraciflua</i> L.	
Tagetes (marigold)	<i>Tagetes patula</i> L., <i>T. erecta</i> L., or <i>T. minuta</i> L. (<i>T. glandulifera</i> Schrank).	As oil only
Tansy	<i>Tanacetum vulgare</i> L.	In alcoholic beverages only; finished beverage free ¹
Thistle, blessed (holy thistle)	<i>Oniscus benedictus</i> L.	In alcoholic beverages only
<i>Thymus capitatus</i> (Spanish "origanum")	<i>Thymus capitatus</i> Hoffm. et Link.	
Tolu	<i>Myroxylon balsamum</i> (L.) Harms.	
Turpentine	<i>Pinus palustris</i> Mill. and other <i>Pinus</i> spp. which yield terpene oils exclusively.	
Valerian rhizome and roots	<i>Valeriana officinalis</i> L.	
Veronica	<i>Veronica officinalis</i> L.	Do.
Vervain, European	<i>Verbena officinalis</i> L.	Do.
Vetiver	<i>Vetiveria zizanioides</i> Stapf	Do.
Violet, Swiss	<i>Viola calcarata</i> L.	
Walnut husks (hulls), leaves, and green nuts	<i>Juglans nigra</i> L. or <i>J. regia</i> L.	
Woodruff, sweet	<i>Asperula odorata</i> L.	In alcoholic beverages only
Yarrow	<i>Achillea millefolium</i> L.	In beverages only; finished beverage free ¹
Yerba santa	<i>Eriodictyon californicum</i> (Hook. et Arn.) Torr.	
Yucca, Joshua-tree	<i>Yucca brevifolia</i> Engelm.	
Yucca, Mohave	<i>Yucca schottigera</i> Roez ex Ortgies (<i>Y. mohavensis</i> Sarg.).	

¹ As determined by using the method (or, in other than alcoholic beverages, a suitable adaptation thereof) in section 9.12 of the "Official Methods of Analysis of the Association of Official Analytical Chemists," 13th Ed. (1980), which is incorporated by reference. Copies may be obtained from the Association of Official Analytical Chemists International, 481 North Frederic Ave., Suite 500, Gaithersburg, MD 20877-2504, or may be examined at the Office of the Federal Register, 800 North Capitol Street, NE, Suite 700, Washington, DC 20408.

[42 FR 14491, Mar. 15, 1977, as amended at 43 FR 14644, Apr. 7, 1978; 49 FR 10104, Mar. 19, 1984; 54 FR 24897, June 12, 1989]

§ 172.515 Synthetic flavoring substances and adjuvants.

Synthetic flavoring substances and adjuvants may be safely used in food in accordance with the following conditions.

(a) They are used in the minimum quantity required to produce their intended effect, and otherwise in accordance with all the principles of good manufacturing practice.

(b) They consist of one or more of the following, used alone or in combination with flavoring substances and adjuvants generally recognized as safe in

food, prior-sanctioned for such use, regulated by an appropriate section of this part.

Acetal; acetaldehyde diethyl acetal.
Acetaldehyde phenethyl propyl acetal.
Acetanilide; 4'-methoxyacetophenone.
Acetophenone; methyl phenyl ketone.
Allyl anthranilate.
Allyl butyrate.
Allyl cinnamate.
Allyl cyclohexanecarboxylate.
Allyl cyclohexanecarboxylate.
Allyl cyclohexanecarboxylate.
Allyl cyclohexanecarboxylate.
Allyl cyclohexanecarboxylate.
Allyl disulfide.
Allyl 2-ethylbutyrate.

Allyl hexanoate; allyl caproate.
 Allyl α -ionone; 1-(2,6,6-trimethyl-2-cyclohex-ene-1-yl)-1,6-heptadiene-3-one.
 Allyl isothiocyanate; mustard oil.
 Allyl isovalerate.
 Allyl mercaptan; 2-propene-1-thiol.
 Allyl nonanoate.
 Allyl octanoate.
 Allyl phenoxyacetate.
 Allyl phenylacetate.
 Allyl propionate.
 Allyl sorbate; allyl 2,4-hexadienoate.
 Allyl sulfide.
 Allyl tiglate; allyl *trans*-2-methyl-2-butenate.
 Allyl 10-undecenoate.
 Ammonium isovalerate.
 Ammonium sulfide.
 Amyl alcohol; pentyl alcohol.
 Amyl butyrate.
 α -Amylcinnamaldehyde.
 α -Amylcinnamaldehyde dimethyl acetal.
 α -Amylcinnamyl acetate.
 α -Amylcinnamyl alcohol.
 α -Amylcinnamyl formate.
 α -Amylcinnamyl isovalerate.
 Amyl formate.
 Amyl heptanoate.
 Amyl hexanoate.
 Amyl octanoate.
 Anisole; methoxybenzene.
 Anisyl acetate.
 Anisyl alcohol; *p*-methoxybenzyl alcohol.
 Anisyl butyrate.
 Anisyl formate.
 Anisyl phenylacetate.
 Anisyl propionate.
 Birchwood creosote.
 Benzaldehyde dimethyl acetal.
 Benzaldehyde glyceryl acetal; 2-phenyl-*m*-dioxan-5-ol.
 Benzaldehyde propylene glycol acetal; 4-methyl-2-phenyl-*m*-dioxolane.
 Benzenethiol; thiophenol.
 Benzene; 2-hydroxy-2-phenylacetophenone.
 Benzophenone; diphenylketone.
 Benzyl acetate.
 Benzyl acetoacetate.
 Benzyl alcohol.
 Benzyl benzoate.
 Benzyl butyl ether.
 Benzyl butyrate.
 Benzyl cinnamate.
 Benzyl 2,3-dimethylcrotonate; benzyl methyl tiglate.
 Benzyl disulfide; dibenzyl disulfide.
 Benzyl ethyl ether.
 Benzyl formate.
 Benzyl 4-heptanone; benzyl dipropyl ketone.
 Benzyl isobutyrate.
 Benzyl isovalerate.
 Benzyl mercaptan; α -toluenethiol.
 Benzyl methoxyethyl acetal; acetaldehyde benzyl β -methoxyethyl acetal.
 Benzyl phenylacetate.
 Benzyl propionate.
 Benzyl salicylate.
 Birch tar oil.
 Borneol; *d*-camphanol.
 Bornyl acetate.
 Bornyl formate.
 Bornyl isovalerate.
 Bornyl valerate.
 β -Bourbonene; 1,2,3,3a,3b β ,4,5,6,6a β ,6ba-decahydro-1a-isopropyl-3a-methyl-6-methylene-cyclobuta [1.2.3.4] dicyclopentene.
 2-Butanol.
 2-Butanone; methyl ethyl ketone.
 Butter acids.
 Butter esters.
 Butyl acetate.
 Butyl acetoacetate.
 Butyl alcohol; 1-butanol.
 Butyl anthranilate.
 Butyl butyrate.
 Butyl butyrylacetate; lactic acid, butyl ester, butyrate.
 α -Butylcinnamaldehyde.
 Butyl cinnamate.
 Butyl 2-decenoate.
 Butyl ethyl malonate.
 Butyl formate.
 Butyl heptanoate.
 Butyl hexanoate.
 Butyl *p*-hydroxybenzoate.
 Butyl isobutyrate.
 Butyl isovalerate.
 Butyl lactate.
 Butyl laurate.
 Butyl levullinate.
 Butyl phenylacetate.
 Butyl propionate.
 Butyl stearate.
 Butyl sulfide.
 Butyl 10-undecenoate.
 Butyl valerate.
 Butyraldehyde.
 Cadinene.
 Camphene; 2,2-dimethyl-3-methylene-norbornane.
d-Camphor.
 Carvacrol; 2-*p*-cymenol.
 Carvacryl ethyl ether; 2-ethoxy-*p*-cymene.
 Carveol; *p*-mentha-6,8-dien-2-ol.
 4-Carvomenthenol; 1-*p*-menthen-4-ol; 4-terpinenol.
cis Carvone oxide; 1,6-epoxy-*p*-menth-8-en-2-one.
 Carvyl acetate.
 Carvyl propionate.
 β -Caryophyllene.
 Caryophyllene alcohol.
 Caryophyllene alcohol acetate.
 β -Caryophyllene oxide; 4-12,12-trimethyl-9-methylene-5-oxatricyclo [8.2.0.0^{4,6}] dodecane.
 Cedarwood oil alcohols.
 Cedarwood oil terpenes.
 1,4-Cineole.
 Cinnamaldehyde ethylene glycol acetal.
 Cinnamic acid.
 Cinnamyl acetate.
 Cinnamyl alcohol; 3-phenyl-2-propen-1-ol.

Cinnamyl benzoate.
Cinnamyl butyrate.
Cinnamyl cinnamate.
Cinnamyl formate.
Cinnamyl isobutyrate.
Cinnamyl isovalerate.
Cinnamyl phenylacetate.
Cinnamyl propionate.
Citral diethyl acetal; 3,7-dimethyl-2,6-octadienal diethyl acetal.
Citral dimethyl acetal; 3,7-dimethyl-2,6-octadienal dimethyl acetal.
Citral propylene glycol acetal.
Citronellal; 3,7-dimethyl-6-octenal; rhodinal.
Citronellol; 3,7-dimethyl-8-octen-1-ol; d-citronellol.
Citronelloxyacetaldehyde.
Citronellyl acetate.
Citronellyl butyrate.
Citronellyl formate.
Citronellyl isobutyrate.
Citronellyl phenylacetate.
Citronellyl propionate.
Citronellyl valerate.
p-Cresol.
Cuminaldehyde; cuminal; p-isopropyl benzaldehyde.
Cyclohexaneacetic acid.
Cyclohexaneethyl acetate.
Cyclohexyl acetate.
Cyclohexyl anthranilate.
Cyclohexyl butyrate.
Cyclohexyl cinnamate.
Cyclohexyl formate.
Cyclohexyl isovalerate.
Cyclohexyl propionate.
p-Cymene.
γ-Decalactone; 4-hydroxy-decanoic acid, γ-lactone.
γ-Decalactone; 5-hydroxy-decanoic acid, δ-lactone.
Decanal dimethyl acetal.
1-Decanol; decylic alcohol.
2-Decenal.
3-Decen-2-one; heptylidene acetone.
Decyl acetate.
Decyl butyrate.
Decyl propionate.
Dibenzyl ether.
4,4-Dibutyl-γ-butyrolactone; 4,4-dibutyl-4-hydroxy-butyric acid, γ-lactone.
Dibutyl sebacate.
Diethyl malate.
Diethyl malonate; ethyl malonate.
Diethyl sebacate.
Diethyl succinate.
Diethyl tartrate.
2,5-Diethyltetrahydrofuran.
Dihydrocarveol; 8-p-menthen-2-ol; 6-methyl-3-isopropenylcyclohexanol.
Dihydrocarvone.
Dihydrocarvyl acetate.
m-Dimethoxybenzene.
p-Dimethoxybenzene; dimethyl hydroquinone.
2,4-Dimethylacetophenone.

α,α-Dimethylbenzyl isobutyrate; phenyl methylcarbinyl isobutyrate.
2,6-Dimethyl-5-heptenal.
2,6-Dimethyl octanal; isodecylaldehyde.
3,7-Dimethyl-1-octanol; tetrahydrogeraniol.
α,α-Dimethylphenethyl acetate; benzyl propyl acetate; benzyl dimethylcarbinyl acetate.
α,α-Dimethylphenethyl alcohol; dimethyl benzyl carbinol.
α,α-Dimethylphenethyl butyrate; benzyl dimethylcarbinyl butyrate.
α,α-Dimethylphenethyl formate; benzyl methylcarbinyl formate.
Dimethyl succinate.
1,3-Diphenyl-2-propanone; dibenzyl ketone.
delta-Dodecalactone; 5-hydroxydodecanoic acid, delta-lactone.
γ-Dodecalactone; 4-hydroxydodecanoic acid, γ-lactone.
2-Dodecenal.
Estragole.
p-Ethoxybenzaldehyde.
Ethyl acetoacetate.
Ethyl 2-acetyl-3-phenylpropionate; ethyl benzyl acetoacetate.
Ethyl aconitate, mixed esters.
Ethyl acrylate.
Ethyl p-anisate.
Ethyl anthranilate.
Ethyl benzoate.
Ethyl benzoylacetate.
α-Ethylbenzyl butyrate; α-phenylpropyl tyrate.
Ethyl brassylate; tridecanedioic acid or ethylene glycol diester; cyclo 1,13-enedioxytridecan-1,13-dione.
2-Ethylbutyl acetate.
2-Ethylbutyraldehyde.
2-Ethylbutyric acid.
Ethyl cinnamate.
Ethyl crotonate; trans-2-butenic acid ethyl ester.
Ethyl cyclohexanepropionate.
Ethyl decanoate.
2-Ethylfuran.
Ethyl 2-furanpropionate.
4-Ethylgualacol; 4-ethyl-2-methoxyphenol.
Ethyl heptanoate.
2-Ethyl-2-heptenal; 2-ethyl-3-butyldiolefin.
Ethyl hexanoate.
Ethyl isobutyrate.
Ethyl isovalerate.
Ethyl lactate.
Ethyl laurate.
Ethyl levulinate.
Ethyl maltol; 2-ethyl-3-hydroxy-4H-pyranone.
Ethyl 2-methylbutyrate.
Ethyl myristate.
Ethyl nitrite.
Ethyl nonanoate.
Ethyl 2-nonynoate; ethyl octyne carbonate.
Ethyl octanoate.
Ethyl oleate.
Ethyl phenylacetate.
Ethyl 4-phenylbutyrate.

Food and Drug Administration, HHS

\$172.515

Ethyl 3-phenylglycidate.
 Ethyl 3-phenylpropionate; ethyl hydrocinnamate.
 Ethyl propionate.
 Ethyl pyruvate.
 Ethyl salicylate.
 Ethyl sorbate; ethyl 2,4-hexadienoate.
 Ethyl tiglate; ethyl *trans*-2-methyl-2-butenate.
 Ethyl undecanoate.
 Ethyl 10-undecenoate.
 Ethyl valerate.
 Eucalyptol; 1,8-epoxy-*p*-menthane; cineole.
 Eugenyl acetate.
 Eugenyl benzoate.
 Eugenyl formate.
 Eugenyl methyl ether; 4-allylveratrole; methyl eugenol.
 Farnesol; 3,7,11-trimethyl-2,6,10-dodecatrien-1-ol.
 4-Fenchone; d-1,3,3-trimethyl-2-norbornanone.
 Fenchyl alcohol; 1,3,3-trimethyl-2-norbornanol.
 Formic acid.
 (Furyl)-2-propanone; furyl acetone.
 Furfuryl-2-propanone; furyl acetone.
 Fuel oil, refined (mixed amyl alcohols).
 Geranyl acetoacetate; *trans*-3,7-dimethyl-2,6-octadien-1-yl acetoacetate.
 Geranyl acetone; 6,10-dimethyl-5,9-undecadien-2-one.
 Geranyl benzoate.
 Geranyl butyrate.
 Geranyl formate.
 Geranyl hexanoate.
 Geranyl isobutyrate.
 Geranyl isovalerate.
 Geranyl phenylacetate.
 Geranyl propionate.
 Geranyl pentaacetate.
 Guaiacol; *p*-methoxyphenol.
 Guaiacyl acetate; *p*-methoxyphenyl acetate.
 Guaiacyl phenylacetate.
 Guanine; 1,4-dimethyl-7-isopropenyl-Δ⁹,10-octahydroazulene.
 Guaiol; acetate; 1,4-dimethyl-7-(α-hydroxyisopropyl)-Δ⁹,10-octahydroazulene acetate.
 Heptadecanoic acid; 4-hydroxyheptanoic acid, γ-butyrolactone.
 Heptanal; enanthaldehyde.
 Heptanal dimethyl acetal.
 Heptanal 1,2-glyceryl acetal.
 Heptanedione; acetyl valeryl.
 Heptanol.
 Heptanone; methyl amyl ketone.
 Heptanone; ethyl butyl ketone.
 Heptanone; dipropyl ketone.
 Heptenal; *cis*-4-hepten-1-ol.
 Heptyl acetate.
 Heptyl alcohol; enanthic alcohol.
 Heptyl butyrate.
 Heptyl cinnamate.
 Heptyl formate.
 Heptyl isobutyrate.
 Heptyl octanoate.
 Heptadecanol; cetyl alcohol.
 ω-6-Hexadecenolactone; hexadecenoic acid, ω-lactone; ambrettolide.
 γ-Hexalactone; 4-hydroxyhexanoic acid, γ-lactone; tonkalide.
 Hexanal; caproic aldehyde.
 2,3-Hexanedione; acetyl butyryl.
 Hexanoic acid; caproic acid.
 2-Hexenal.
 2-Hexen-1-ol.
 3-Hexen-1-ol; leaf alcohol.
 2-Hexen-1-yl acetate.
 3-Hexenyl isovalerate.
 3-Hexenyl 2-methylbutyrate.
 3-Hexenyl phenylacetate; *cis*-3-hexenyl phenylacetate.
 Hexyl acetate.
 2-Hexyl-4-acetoxytetrahydrofuran.
 Hexyl alcohol.
 Hexyl butyrate.
 α-Hexylcinnamaldehyde.
 Hexyl formate.
 Hexyl hexanoate.
 2-Hexylidene cyclopentanone.
 Hexyl isovalerate.
 Hexyl 2-methylbutyrate.
 Hexyl octanoate.
 Hexyl phenylacetate; *n*-hexyl phenylacetate.
 Hexyl propionate.
 Hydroxycitronellal; 3,7-dimethyl-7-hydroxy-octanal.
 Hydroxycitronellal diethyl acetal.
 Hydroxycitronellal dimethyl acetal.
 Hydroxycitronellal; 3,7-dimethyl-1,7-octanediol.
N-(4-Hydroxy-3-methoxybenzyl)-nonanamide; pelargonyl vanillylamide.
 5-Hydroxy-4-octanone; butyrolin.
 4-(*p*-Hydroxyphenyl)-2-butanone; *p*-hydroxybenzyl acetone.
 Indole.
 α-Ionone; 4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one.
 β-Ionone; 4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3-buten-2-one.
 α-Ironone; 4-(2,5,6,6-tetramethyl-2-cyclohexen-1-yl)-3-buten-2-one; 6-methylionone.
 Isoamyl acetate.
 Isoamyl acetoacetate.
 Isoamyl alcohol; isopentyl alcohol; 3-methyl-1-butanol.
 Isoamyl benzoate.
 Isoamyl butyrate.
 Isoamyl cinnamate.
 Isoamyl formate.
 Isoamyl 2-furanbutyrate; α-isoamyl furfurylpropionate.
 Isoamyl 2-furanpropionate; α-isoamyl furfurylacetate.
 Isoamyl hexanoate.
 Isoamyl isobutyrate.
 Isoamyl isovalerate.
 Isoamyl laurate.
 Isoamyl-2-methylbutyrate; isopentyl-2-methylbutyrate.
 Isoamyl nonanoate.
 Isoamyl octanoate.

Isoamyl phenylacetate.
 Isoamyl propionate.
 Isoamyl pyruvate.
 Isoamyl salicylate.
 Isoborneol.
 Isobornyl acetate.
 Isobornyl formate.
 Isobornyl isovalerate.
 Isobornyl propionate.
 Isobutyl acetate.
 Isobutyl acetoacetate.
 Isobutyl alcohol.
 Isobutyl angelate; isobutyl *cis*-2-methyl-2-butenate.
 Isobutyl anthranilate.
 Isobutyl benzoate.
 Isobutyl butyrate.
 Isobutyl cinnamate.
 Isobutyl formate.
 Isobutyl 2-furanpropionate.
 Isobutyl heptanoate.
 Isobutyl hexanoate.
 Isobutyl isobutyrate.
 α -Isobutylphenethyl alcohol; isobutyl benzyl carbinol; 4-methyl-1-phenyl-2-pentanol.
 Isobutyl phenylacetate.
 Isobutyl propionate.
 Isobutyl salicylate.
 2-Isobutylthiazole.
 Isobutyraldehyde.
 Isobutyric acid.
 Isoeugenol; 2-methoxy-4-propenylphenol.
 Isoeugenyl acetate.
 Isoeugenyl benzyl ether; benzyl isoeugenol.
 Isoeugenyl ethyl ether; 2-ethoxy-5-propenyl-anisole; ethyl isoeugenol.
 Isoeugenyl formate.
 Isoeugenyl methyl ether; 4-propenyl-veratrole; methyl isoeugenol.
 Isoeugenyl phenylacetate.
 Isojasnone; mixture of 2-hexylidenecyclopentanone and 2-hexyl-2-cyclopenten-1-one.
 α -Isomethylionone; 4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-methyl-3-buten-2-one; methyl γ -ionone.
 Isopropyl acetate.
p-Isopropylacetophenone.
 Isopropyl alcohol; isopropanol.
 Isopropyl benzoate.
p-Isopropylbenzyl alcohol; cuminic alcohol; *p*-cymen-7-ol.
 Isopropyl butyrate.
 Isopropyl cinnamate.
 Isopropyl formate.
 Isopropyl hexanoate.
 Isopropyl isobutyrate.
 Isopropyl isovalerate.
p-Isopropylphenylacetaldehyde; *p*-cymen-7-carboxaldehyde.
 Isopropyl phenylacetate.
 3-(*p*-Isopropylphenyl)-propionaldehyde; *p*-isopropylhydrocinnamaldehyde; cuminyl acetaldehyde.
 Isopropyl propionate.
 Isopulegol; *p*-menth-8-en-3-ol.
 Isopulegone; *p*-menth-8-en-3-one.
 Isopulegyl acetate.

Isoquinoline.
 Isovaleric acid.
cis-Jasmon; 3-methyl-2-(2-pentenyl)-4-penten-1-one.
 Lauric aldehyde; dodecanal.
 Lauryl acetate.
 Lauryl alcohol; 1-dodecanol.
 Lepidine; 4-methylquinoline.
 Levulinic acid.
 Linalool oxide; *cis*- and *trans*-2-vinyl-2-yl-5-(1'-hydroxy-1'-methylethyl)hydrofuran.
 Linalyl anthranilate; 3,7-dimethyloctadien-3-yl anthranilate.
 Linalyl benzoate.
 Linalyl butyrate.
 Linalyl cinnamate.
 Linalyl formate.
 Linalyl hexanoate.
 Linalyl isobutyrate.
 Linalyl isovalerate.
 Linalyl octanoate.
 Linalyl propionate.
 Maltol; 3-hydroxy-2-methyl-4H-pyran-4-one.
 Menthadienol; *p*-mentha-1,8(10)-dien-9-ol.
p-Mentha-1,8-dien-7-ol; perillyl alcohol.
 Menthadienyl acetate; *p*-mentha-1,8(10)-9-yl acetate.
p-Menth-3-en-1-ol.
 1-*p*-Menthen-9-yl acetate; *p*-menth-1-en-9-yl acetate.
 Menthol; 2-isopropyl-5-methylcyclohexanol.
 Menthone; *p*-menthan-3-one.
 Menthyl acetate; *p*-menth-3-yl acetate.
 Menthyl isovalerate; *p*-menth-3-yl isovalerate.
o-Methoxybenzaldehyde.
p-Methoxybenzaldehyde; *p*-anisaldehyde.
o-Methoxycinnamaldehyde.
 2-Methoxy-4-methylphenol; 4-methylgualacol; 2-methoxy-*p*-cresol.
 4-(*p*-Methoxyphenyl)-2-butanone; anisyl tone.
 1-(4-Methoxyphenyl)-4-methyl-1-penten-3-one; methoxystyryl isopropyl ketone.
 1-(*p*-Methoxyphenyl)-1-penten-3-one; methylanisylidene acetone; ethone.
 1-(*p*-Methoxyphenyl)-2-propanone; anisylmethyl ketone; anisic ketone.
 2-Methoxy-4-vinylphenol; *p*-vinylgualacol.
 Methyl acetate.
 4'-Methylacetophenone; *p*-methylacetophenone; methyl *p*-tolyl ketone.
 2-Methylallyl butyrate; 2-methyl-2-propenyl butyrate.
 Methyl anisate.
o-Methylanisole; *o*-cresyl methyl ether.
p-Methylanisole; *p*-cresyl methyl ether; methoxytoluene.
 Methyl benzoate.
 Methylbenzyl acetate, mixed *o*-, *m*-, *p*-.
 α -Methylbenzyl acetate; styralyl acetate.
 α -Methylbenzyl alcohol; styralyl alcohol.
 α -Methylbenzyl butyrate; styralyl butyrate.
 α -Methylbenzyl isobutyrate; styralyl isobutyrate.
 α -Methylbenzyl formate; styralyl formate.

Food and Drug Administration, HHS

\$172.515

α -Methylbenzyl propionate; styralyl propionate.
 2-Methyl-3-buten-2-ol.
 2-Methylbutyl isovalerate.
 Methyl *p*-tert-butylphenylacetate.
 2-Methylbutyraldehyde; methyl ethyl acetaldehyde.
 3-Methylbutyraldehyde; isovaleraldehyde.
 Methyl butyrate.
 2-Methylbutyric acid.
 α -Methylcinnamaldehyde.
p-Methylcinnamaldehyde.
 Methyl cinnamate.
 2-Methyl-1,3-cyclohexadiene.
 Methylcyclopentenolone; 3-methylcyclopentane-1,2-dione.
 Methyl disulfide; dimethyl disulfide.
 Methyl ester of rosin, partially hydrogenated (as defined in §172.615); methyl dihydroabietate.
 Methyl heptanoate.
 2-Methylheptanoic acid.
 6-Methyl-3,5-heptadien-2-one.
 Methyl-5-hepten-2-ol.
 6-Methyl-5-hepten-2-one.
 Methyl hexanoate.
 Methyl 2-hexanoate.
 Methyl *p*-hydroxybenzoate; methylparaben.
 Methyl α -ionone; 5-(2,6,6-trimethyl-2-cyclohexen-1-yl)-4-penten-3-one.
 Methyl β -ionone; 5-(2,6,6-trimethyl-1-cyclohexen-1-yl)-4-penten-3-one.
 Methyl Δ -ionone; 5-(2,6,6-trimethyl-3-cyclohexen-1-yl)-4-penten-3-one.
 Methyl isobutyrate.
 2-Methyl-3-(*p*-isopropylphenyl)-propionaldehyde; α -methyl-*p*-isopropylhydrocinnamaldehyde; cyclamen aldehyde.
 Methyl isovalerate.
 Methyl laurate.
 Methyl mercaptan; methanethiol.
 Methyl *o*-methoxybenzoate.
 Methyl *N*-methylantranilate; dimethyl antranilate.
 Methyl 2-methylbutyrate.
 Methyl 3-methylthiopropionate.
 Methyl 4-methylvalerate.
 Methyl myristate.
 Methyl β -naphthyl ketone; 2'-acetonaphthone.
 Methyl nonanoate.
 Methyl 2-nonenolate.
 Methyl 2-nonyloate; methyl octyne carboxylate.
 Methyl octanal; methyl hexyl acetaldehyde.
 Methyl octanoate.
 Methyl 2-octynoate; methyl heptene carboxylate.
 Methyl 2,3-pentanedione; acetyl isobutyrate.
 Methyl 2-pentanone; methyl isobutyl ketone.
 Methyl phenethyl alcohol; hydratropyl alcohol.
 Methyl phenylacetate.
 Methyl-4-phenyl-3-butene-2-one.

2-Methyl-4-phenyl-2-butyl acetate; dimethylphenylethyl carbinyl acetate.
 2-Methyl-4-phenyl-2-butyl isobutyrate; dimethylphenyl ethylcarbinyl isobutyrate.
 3-Methyl-2-phenylbutyraldehyde; α -isopropyl phenylacetaldehyde.
 Methyl 4-phenylbutyrate.
 4-Methyl-1-phenyl-2-pentanone; benzyl isobutyl ketone.
 Methyl 3-phenylpropionate; methyl hydrocinnamate.
 Methyl propionate.
 3-Methyl-5-propyl-2-cyclohexen-1-one.
 Methyl sulfide.
 3-Methylthiopropionaldehyde; methional.
 2-Methyl-3-tolylpropionaldehyde, mixed *o*-, *m*-, *p*-.
 2-Methylundecanal; methyl nonyl acetaldehyde.
 Methyl 9-undecenoate.
 Methyl 2-undecynoate; methyl decyne carbonate.
 Methyl valerate.
 2-Methylvaleric acid.
 Myrcene; 7-methyl-3-methylene-1,6-octadiene.
 Myristaldehyde; tetradecanal.
d-Neomenthol; 2-isopropyl-5-methylcyclohexanol.
 Nerol; *cis*-3,7-dimethyl-2,6-octadien-1-ol.
 Nerolidol; 3,7,11-trimethyl-1,6,10-dodecatrien-3-ol.
 Neryl acetate.
 Neryl butyrate.
 Neryl formate.
 Neryl isobutyrate.
 Neryl isovalerate.
 Neryl propionate.
 2,6-Nonadien-1-ol.
 γ -Nonalactone; 4-hydroxynonanoic acid, γ -lactone; aldehyde C-18.
 Nonanal; pelargonic aldehyde.
 1,3-Nonanediol acetate, mixed esters.
 Nonanoic acid; pelargonic acid.
 2-Nonanone; methylheptyl ketone.
 3-Nonanon-1-yl acetate; 1-hydroxy-3-nonanone acetate.
 Nonyl acetate.
 Nonyl alcohol; 1-nonanol.
 Nonyl octanoate.
 Nonyl isovalerate.
 Nootkatone; 5,6-dimethyl-8-isopropenylbicyclo[4,4,0]-dec-1-en-3-one.
 Ocimene; *trans*- β -ocimene; 3,7-dimethyl-1,3,6-octatriene.
 γ -Octalactone; 4-hydroxyoctanoic acid, γ -lactone.
 Octanal; caprylaldehyde.
 Octanal dimethyl acetal.
 1-Octanol; octyl alcohol.
 2-Octanol.
 3-Octanol.
 2-Octanone; methyl hexyl ketone.
 3-Octanone; ethyl amyl ketone.
 3-Octanon-1-ol.
 1-Octen-3-ol; amyl vinyl carbinol.
 1-Octen-3-yl acetate.

Octyl acetate.
3-Octyl acetate.
Octyl butyrate.
Octyl formate.
Octyl heptanoate.
Octyl isobutyrate.
Octyl isovalerate.
Octyl octanoate.
Octyl phenylacetate.
Octyl propionate.
ω-Pentadecalactone; 15-hydroxypentadecanoic acid, ω-lactone; pentadecanolide; angelica lactone.
2,3-Pentanedione; acetyl propionyl.
2-Pentanone; methyl propyl ketone.
4-Pentenol acid.
1-Penten-3-ol.
Perillaldehyde; 4-isopropenyl-1-cyclohexene-1-carboxaldehyde; p-mentha-1,8-dien-7-al.
Perillyl acetate; p-mentha-1,8-dien-7-yl acetate.
α-Phellandrene; p-mentha-1,5-diene.
Phenethyl acetate.
Phenethyl alcohol; β-phenylethyl alcohol.
Phenethyl anthranilate.
Phenethyl benzoate.
Phenethyl butyrate.
Phenethyl cinnamate.
Phenethyl formate.
Phenethyl isobutyrate.
Phenethyl isovalerate.
Phenethyl 2-methylbutyrate.
Phenethyl phenylacetate.
Phenethyl propionate.
Phenethyl salicylate.
Phenethyl seneciolate; phenethyl 3,3-dimethylacrylate.
Phenethyl tiglate.
Phenoxyacetic acid.
2-Phenoxyethyl isobutyrate.
Phenylacetaldehyde; α-toluic aldehyde.
Phenylacetaldehyde 2,3-butylene glycol acetal.
Phenylacetaldehyde dimethyl acetal.
Phenylacetaldehyde glyceryl acetal.
Phenylacetic acid; α-toluic acid.
4-Phenyl-2-butanol; phenylethyl methyl carbinol.
4-Phenyl-3-buten-2-ol; methyl styryl carbinol.
4-Phenyl-3-buten-2-one.
4-Phenyl-2-butyl acetate; phenylethyl methyl carbonyl acetate.
1-Phenyl-3-methyl-3-pentanol; phenylethyl methyl ethyl carbinol.
1-Phenyl-1-propanol; phenylethyl carbinol.
3-Phenyl-1-propanol; hydrocinnamyl alcohol.
2-Phenylpropionaldehyde; hydratropaldehyde.
3-Phenylpropionaldehyde; hydrocinnamaldehyde.
2-Phenylpropionaldehyde dimethyl acetal; hydratropaldehyde dimethyl acetal.
3-Phenylpropionic acid; hydrocinnamic acid.
3-Phenylpropyl acetate.
2-Phenylpropyl butyrate.
3-Phenylpropyl cinnamate.
3-Phenylpropyl formate.
3-Phenylpropyl hexanoate.
2-Phenylpropyl isobutyrate.
3-Phenylpropyl isobutyrate.
3-Phenylpropyl isovalerate.
3-Phenylpropyl propionate.
2-(3-Phenylpropyl)-tetrahydrofuran.
α-Pinene; 2-pinene.
β-Pinene; 2(10)-pinene.
Pine tar oil.
Pinocarveol; 2(10)-pinen-3-ol.
Piperidine.
Piperine.
d-Piperitone; p-menth-1-en-3-one.
Piperitenone; p-mentha-1,4(8)-dien-3-one.
Piperitenone oxide; 1,2-epoxy-p-menth-1-en-3-one.
Piperonyl acetate; heliotropyl acetate.
Piperonyl isobutyrate.
Polylimonene.
Polysorbate 20; polyoxyethylene (20) monolaurate.
Polysorbate 60; polyoxyethylene (20) monostearate.
Polysorbate 80; polyoxyethylene (20) monooleate.
Potassium acetate.
Propenylguaethol; 6-ethoxy-m-anol.
Propionaldehyde.
Propyl acetate.
Propyl alcohol; 1-propanol.
p-Propyl anisole; dihydroanethole.
Propyl benzoate.
Propyl butyrate.
Propyl cinnamate.
Propyl disulfide.
Propyl formate.
Propyl 2-furanacrylate.
Propyl heptanoate.
Propyl hexanoate.
Propyl p-hydroxybenzoate; propylparaben.
3-Propylidenephthalide.
Propyl isobutyrate.
Propyl isovalerate.
Propyl mercaptan.
α-Propylphenethyl alcohol.
Propyl phenylacetate.
Propyl propionate.
Pulegone; p-menth-4(8)-en-3-one.
Pyridine.
Pyroligneous acid extract.
Pyrvaldehyde.
Pyruvic acid.
Rhodinol; 3,7-dimethyl-7-octen-1-ol; citronellol.
Rhodinyl acetate.
Rhodinyl butyrate.
Rhodinyl formate.
Rhodinyl isobutyrate.
Rhodinyl isovalerate.
Rhodinyl phenylacetate.
Rhodinyl propionate.
Rum ether; ethyl oxyhydrate.
Salicylaldehyde.
Santalol, α and β.
Santalyl acetate.
Santalyl phenylacetate.

Skatole.
 Sorbitan monostearate.
 Styrene.
 Sucrose octaacetate.
 α -Terpinene.
 γ -Terpinene.
 α -Terpineol; *p*-menth-1-en-8-ol.
 β -Terpineol.
 Terpinolene; *p*-menth-1,4(8)-diene.
 Terpinyl acetate.
 Terpinyl anthranilate.
 Terpinyl butyrate.
 Terpinyl cinnamate.
 Terpinyl formate.
 Terpinyl isobutyrate.
 Terpinyl isovalerate.
 Terpinyl propionate.
 Tetrahydrofurfuryl acetate.
 Tetrahydrofurfuryl alcohol.
 Tetrahydrofurfuryl butyrate.
 Tetrahydrofurfuryl propionate.
 Tetrahydro-pseudo-ionone; 6,10-dimethyl-9-undecen-2-one.
 Tetrahydrolinalool; 3,7-dimethyloctan-3-ol.
 Tetramethyl ethylcyclohexenone; mixture of 5-ethyl-2,3,4,5-tetramethyl-2-cyclohexen-1-one and 5-ethyl-3,4,5,6-tetramethyl-2-cyclohexen-1-one.
 2-Thienyl mercaptan; 2-thienylthiol.
 Thymol.
 Tolualdehyde glyceryl acetal, mixed *o*, *m*, *p*.
 Tolualdehydes, mixed *o*, *m*, *p*.
 β -Tolylacetaldehyde.
 β -Tolyl acetate; *o*-cresyl acetate.
 β -Tolyl acetate; *p*-cresyl acetate.
 (4- β -Tolyl)-2-butanone; *p*-methylbenzylacetone.
 β -Tolyl isobutyrate.
 β -Tolyl laurate.
 β -Tolyl phenylacetate.
 (2- β -Tolyl)-propionaldehyde; *p*-methylhydra-
 (2- β -Tolyl)-aldehyde.
 Tributyl acetylcitrate.
 Tridecenal.
 13-Undecadione; acetyl nonyl.
 Undecalactone; 4-hydroxyundecanoic acid.
 Undecalone; peach aldehyde; aldehyde C-14.
 Undecenal.
 Undecanone; methyl nonyl ketone.
 Undecenal; undecenoic aldehyde.
 Undecenal.
 Undecen-1-ol; undecylenic alcohol.
 Undecen-1-yl acetate.
 Undecyl alcohol.
 Valeraldehyde; pentanal.
 Valeric acid; pentanoic acid.
 Vanillin acetate; acetyl vanillin.
 Vantraldehyde.
 Verbanol; 2-pinen-4-ol.
 Zingiberone; 4-(4-hydroxy-3-methoxyphenyl)-2-butanone.
 (c) Δ^8 -Decalactone and Δ^9 -dodecalactone when used separately or in combination in oleomargarine are used at levels not to exceed 10 parts per million and 20 parts per million, re-

spectively, in accordance with § 166.110 of this chapter.

(d) BHA (butylated hydroxyanisole) may be used as an antioxidant in flavoring substances whereby the additive does not exceed 0.5 percent of the essential (volatile) oil content of the flavoring substance.

[42 FR 14491, Mar. 15, 1977, as amended at 42 FR 23148, May 6, 1977; 43 FR 19843, May 9, 1978; 45 FR 22915, Apr. 4, 1980; 47 FR 27810, June 25, 1982; 48 FR 10812, Mar. 15, 1983; 49 FR 51907, Nov. 15, 1983; 49 FR 5747, Feb. 15, 1984; 50 FR 42932, Oct. 23, 1985; 54 FR 7402, Feb. 21, 1989; 61 FR 14245, Apr. 1, 1996]

§ 172.520 Cocoa with dioctyl sodium sulfosuccinate for manufacturing.

The food additive "cocoa with dioctyl sodium sulfosuccinate for manufacturing," conforming to § 163.117 of this chapter and § 172.810, is used or intended for use as a flavoring substance in dry beverage mixes whereby the amount of dioctyl sodium sulfosuccinate does not exceed 75 parts per million of the finished beverage. The labeling of the dry beverage mix shall bear adequate directions to assure use in compliance with this section.

§ 172.530 Disodium guanylate.

Disodium guanylate may be safely used as a flavor enhancer in foods, at a level not in excess of that reasonably required to produce the intended effect.

§ 172.535 Disodium inosinate.

The food additive disodium inosinate may be safely used in food in accordance with the following prescribed conditions:

(a) The food additive is the disodium salt of inosinic acid, manufactured and purified so as to contain no more than 150 parts per million of soluble barium in the compound disodium inosinate with seven and one-half molecules of water of crystallization.

(b) The food additive is used as a flavoring adjuvant in food.

§ 172.540 DL-Alanine.

DL-Alanine (a racemic mixture of D- and L-alanine; CAS Reg. No. 302-72-7) may be safely used as a flavor enhancer for sweeteners in pickling mixtures at a level not to exceed 1 percent of the

(3) Rigid and semirigid containers. (1) Acrylonitrile/butadiene/styrene copolymer—for use only as piping for handling food products and for repeated-use articles intended to contact food.

(II) Acrylonitrile/styrene resin—no restrictions.

(III) Acrylonitrile/butadiene copolymer blended with polyvinyl chloride resin—for use only as extruded pipe.

(b) Limitations for acrylonitrile monomer extraction for finished food-contact articles, determined by using the method of analysis titled "Gas-Solid Chromatographic Procedure for Determining Acrylonitrile Monomer in Acrylonitrile-Containing Polymers and Food-Simulating Solvents," which is incorporated by reference. Copies are available from the Center for Food Safety and Applied Nutrition (HFS-200), Food and Drug Administration, 200 St. SW., Washington, DC 20204, or available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC 20540, are as follows:

(1) In the case of single-use articles having a volume to surface ratio of 10 milliliters or more per square inch of food-contact surface—0.003 milligram/square inch when extracted to equilibrium at 120 °F with food-simulating solvents appropriate to the intended conditions of use.

(2) In the case of single-use articles having a volume to surface ratio of less than 10 milliliters per square inch of food-contact surface—0.3 part per million, calculated on the basis of the volume of the container when extracted to equilibrium at 120 °F with food-simulating solvents appropriate to the intended conditions of use.

(3) In the case of repeated-use articles—0.003 milligram/square inch when extracted at a time equivalent to initial batch usage utilizing food-simulating solvents and temperatures appropriate to the intended conditions of use.

The food-simulating solvents shall include, where applicable, distilled water, 48 percent or 50 percent ethanol, 1 percent acetic acid, and either n-hexane or an appropriate oil or fat.

(c) Acrylonitrile monomer may present a hazard to health when inhaled. Accordingly, any food-contact

article containing acrylonitrile copolymers or resins that yield acrylonitrile monomer in excess of that amount provided for in paragraph (b) of this section shall be deemed to be adulterated in violation of section 402 of the Act.

[42 FR 14638, Mar. 15, 1977, as amended at 47 FR 11850, Mar. 19, 1982; 54 FR 24899, June 12, 1989]

§ 181.33 Sodium nitrate and potassium nitrate.

Sodium nitrate and potassium nitrate are subject to prior sanctions issued by the U.S. Department of Agriculture for use as sources of nitrite, with or without sodium or potassium nitrite, in the production of cured red meat products and cured poultry products.

[48 FR 1705, Jan. 14, 1983]

§ 181.34 Sodium nitrite and potassium nitrite.

Sodium nitrite and potassium nitrite are subject to prior sanctions issued by the U.S. Department of Agriculture for use as color fixatives and preservative agents, with or without sodium or potassium nitrate, in the curing of red meat and poultry products.

[48 FR 1705, Jan. 14, 1983]

PART 182—SUBSTANCES GENERALLY RECOGNIZED AS SAFE

Subpart A—General Provisions

Sec.

182.1 Substances that are generally recognized as safe.

182.10 Spices and other natural seasonings and flavorings.

182.20 Essential oils, oleoresins (solvent-free), and natural extractives (including distillates).

182.40 Natural extractives (solvent-free) used in conjunction with spices, seasonings, and flavorings.

182.50 Certain other spices, seasonings, essential oils, oleoresins, and natural extracts.

182.60 Synthetic flavoring substances and adjuvants.

182.70 Substances migrating from cotton and cotton fabrics used in dry food packaging.

182.90 Substances migrating to food from paper and paperboard products.

182.99 Adjuvants for pesticide chemicals.

Subpart B—Multiple Purpose GRAS Food Substances

182.1045	Glutamic acid.
182.1047	Glutamic acid hydrochloride.
182.1057	Hydrochloric acid.
182.1073	Phosphoric acid.
182.1087	Sodium acid pyrophosphate.
182.1125	Aluminum sulfate.
182.1127	Aluminum ammonium sulfate.
182.1129	Aluminum potassium sulfate.
182.1131	Aluminum sodium sulfate.
182.1180	Caffeine.
182.1217	Calcium phosphate.
182.1235	Caramel.
182.1320	Glycerin.
182.1480	Methylcellulose.
182.1500	Monoammonium glutamate.
182.1516	Monopotassium glutamate.
182.1711	Silica aerogel.
182.1745	Sodium carboxymethylcellulose.
182.1748	Sodium caseinate.
182.1778	Sodium phosphate.
182.1781	Sodium aluminum phosphate.
182.1810	Sodium tripolyphosphate.

Subpart C—Anticaking Agents

182.2122	Aluminum calcium silicate.
182.2227	Calcium silicate.
182.2437	Magnesium silicate.
182.2727	Sodium aluminosilicate.
182.2729	Sodium calcium aluminosilicate, hydrated.
182.2906	Tricalcium silicate.

Subpart D—Chemical Preservatives

182.3013	Ascorbic acid.
182.3041	Erythorbic acid.
182.3089	Sorbic acid.
182.3109	Thiodipropionic acid.
182.3149	Ascorbyl palmitate.
182.3169	Butylated hydroxyanisole.
182.3173	Butylated hydroxytoluene.
182.3189	Calcium ascorbate.
182.3225	Calcium sorbate.
182.3280	Dilauryl thiodipropionate.
182.3616	Potassium bisulfite.
182.3637	Potassium metabisulfite.
182.3640	Potassium sorbate.
182.3731	Sodium ascorbate.
182.3739	Sodium bisulfite.
182.3766	Sodium metabisulfite.
182.3795	Sodium sorbate.
182.3798	Sodium sulfite.
182.3862	Sulfur dioxide.
182.3890	Tocopherols.

Subpart E—Emulsifying Agents [Reserved]**Subpart F—Dietary Supplements [Reserved]****Subpart G—Sequestrants**

182.6085	Sodium acid phosphate.
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182.6197	Calcium diacetate.
182.6203	Calcium hexametaphosphate.
182.6215	Monobasic calcium phosphate.
182.6235	Dipotassium phosphate.
182.6290	Disodium phosphate.
182.6757	Sodium gluconate.
182.6760	Sodium hexametaphosphate.
182.6769	Sodium metaphosphate.
182.6778	Sodium phosphate.
182.6787	Sodium pyrophosphate.
182.6789	Tetra sodium pyrophosphate.
182.6810	Sodium tripolyphosphate.

Subpart H—Stabilizers

182.7255	Chondrus extract.
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Subpart I—Nutrients

182.8013	Ascorbic acid.
182.8159	Biotin.
182.8217	Calcium phosphate.
182.8223	Calcium pyrophosphate.
182.8250	Choline bitartrate.
182.8252	Choline chloride.
182.8778	Sodium phosphate.
182.8890	Tocopherols.
182.8892	α -Tocopherol acetate.
182.8985	Zinc chloride.
182.8988	Zinc gluconate.
182.8991	Zinc oxide.
182.8994	Zinc stearate.
182.8997	Zinc sulfate.

AUTHORITY: 21 U.S.C. 321, 342, 348, 371.

SOURCE: 42 FR 14640, Mar. 15, 1977, unless otherwise noted.

Subpart A—General Provisions**§ 182.1 Substances that are generally recognized as safe.**

(a) It is impracticable to list all substances that are generally recognized as safe for their intended use. However, by way of illustration, the Commissioner regards such common food ingredients as salt, pepper, vinegar, baking powder, and monosodium glutamate as safe for their intended use. This part includes additional substances that, when used for the purposes indicated, in accordance with good manufacturing practice, are regarded by the Commissioner as generally recognized as safe for such uses.

(b) For the purposes of this section, good manufacturing practice shall be defined to include the following restrictions:

(1) The quantity of a substance added to food does not exceed the amount reasonably required to accomplish its

intended physical, nutritional, or other technical effect in food; and

(2) The quantity of a substance that becomes a component of food as a result of its use in the manufacturing, processing, or packaging of food, and which is not intended to accomplish any physical or other technical effect on the food itself, shall be reduced to the extent reasonably possible.

(3) The substance is of appropriate food grade and is prepared and handled as a food ingredient. Upon request the Commissioner will offer an opinion, based on specifications and intended use, as to whether or not a particular grade or lot of the substance is of suitable purity for use in food and would generally be regarded as safe for the purpose intended, by experts qualified to evaluate its safety.

(c) The inclusion of substances in the list of nutrients does not constitute a finding on the part of the Department that the substance is useful as a supplement to the diet for humans.

(d) Substances that are generally recognized as safe for their intended use within the meaning of section 409 of the act are listed in this part. When the status of a substance has been re-evaluated, it will be deleted from this part, and will be issued as a new regulation under the appropriate part, e.g., "affirmed as GRAS" under part 184 or 186 of this chapter; "food additive regulation" under parts 170 through 180 of this chapter; "interim food additive regulation" under part 180 of this chapter; or "prohibited from use in food" under part 189 of this chapter.

[42 FR 14640, Mar. 15, 1977, as amended at 53 FR 44875, Nov. 7, 1988]

§ 182.10 Spices and other natural seasonings and flavorings.

Spices and other natural seasonings and flavorings that are generally recognized as safe for their intended use, within the meaning of section 409 of the Act, are as follows:

Common name	Botanical name of plant source
Allspice herb and seed	Medicago sativa L.
Allspice	Pimenta officinalis Lindl.
Alfalfa seed	Hibiscus abelmoschus L.
Angelica	Angelica archangelica L. or other spp. of Angelica.
Angelica root	Do.
Angelica seed	Do.
Anise (cuspata bark)	Galipea officinalis Hancock.
Anise	Pimpinella anisum L.
Anise star	Illicium verum Hook. f.
Anise (lemon balm)	Meissa officinalis L.
Anise bush	Ocimum minimum L.
Anise sweet	Ocimum basilicum L.
Anise	Laurus nobilis L.
Anise	Calendula officinalis L.
Anise (chamomile), English or Roman	Anthemis nobilis L.
Anise (chamomile), German or Hungarian	Matricaria chamomilla L.
Anise	Capparis spinosa L.
Anise	Capsicum frutescens L. or Capsicum annum L.
Anise	Carum carvi L.
Anise, black (black cumin)	Nigella sativa L.
Anise (cardamom)	Elettaria cardamomum Maton.
Anise, Chinese	Cinnamomum cassia Blume.
Anise, Padang or Batavia	Cinnamomum burmanni Blume.
Anise, Saigon	Cinnamomum loureirii Nees.
Anise pepper	Capsicum frutescens L. or Capsicum annum L.
Anise seed	Apium graveolens L.
Anise	Anthriscus cerefolium (L.) Hoffm.
Anise	Allium schoenoprasum L.
Anise, Ceylon	Cinnamomum zeylanicum Nees.
Anise, Chinese	Cinnamomum cassia Blume.
Anise, Saigon	Cinnamomum loureirii Nees.
Anise (clay sage)	Salvia sclarea L.
Anise	Trifolium spp.
Anise	Coriandrum sativum L.
Anise (cumin)	Cuminum cyminum L.
Anise, black (black caraway)	Nigella sativa L.
Anise flowers	Sambucus canadensis L.
Anise, common	Foeniculum vulgare Mill.
Anise, sweet (finocchio, Florence fennel)	Foeniculum vulgare Mill. var. dulce (DC.) Alex.
Anise	Trigonella foenum-graecum L.

Common name	Botanical name of plant source
Galanga (galangal)	<i>Alpinia officinarum</i> Hance.
Geranium	<i>Pelargonium</i> spp.
Ginger	<i>Zingiber officinale</i> Rosc.
Grains of paradise	<i>Amomum melegueta</i> Rosc.
Hoarhound (hoarhound)	<i>Marrubium vulgare</i> L.
Horseradish	<i>Armoracia lapathifolia</i> Glibb.
Hyscop	<i>Hyssopus officinalis</i> L.
Lavender	<i>Lavandula officinalis</i> Chabx.
Linden flowers	<i>Tilia</i> spp.
Mace	<i>Myristica fragrans</i> Houtt.
Marigold, pot	<i>Calendula officinalis</i> L.
Marjoram, pot	<i>Majorana onites</i> (L.) Benth.
Marjoram, sweet	<i>Majorana hortensis</i> Moench.
Mustard, black or brown	<i>Brassica nigra</i> (L.) Koch.
Mustard, brown	<i>Brassica juncea</i> (L.) Coss.
Mustard, white or yellow	<i>Brassica hirta</i> Moench.
Nutmeg	<i>Myristica fragrans</i> Houtt.
Oregano (oreganum, Mexican oregano, Mexican sage, origan)	<i>Lippia</i> spp.
Paprika	<i>Capsicum annuum</i> L.
Parsley	<i>Petroselinum crispum</i> (Mill.) Mansf.
Pepper, black	<i>Piper nigrum</i> L.
Pepper, cayenne	<i>Capsicum frutescens</i> L. or <i>Capsicum annuum</i> L.
Pepper, red	Do.
Pepper, white	<i>Piper nigrum</i> L.
Peppermint	<i>Mentha piperita</i> L.
Poppy seed	<i>Papaver somniferum</i> L.
Pot marigold	<i>Calendula officinalis</i> L.
Pot marjoram	<i>Majorana onites</i> (L.) Benth.
Rosemary	<i>Rosmarinus officinalis</i> L.
Saffron	<i>Crocus sativus</i> L.
Sage	<i>Salvia officinalis</i> L.
Sage, Greek	<i>Salvia triloba</i> L.
Savory, summer	<i>Satureia hortensis</i> L. (Satureja).
Savory, winter	<i>Satureia montana</i> L. (Satureja).
Sesame	<i>Sesamum indicum</i> L.
Spearmint	<i>Mentha spicata</i> L.
Star anise	<i>Illicium verum</i> Hook. f.
Tarragon	<i>Artemisia dracunculus</i> L.
Thyme	<i>Thymus vulgaris</i> L.
Thyme, wild or creeping	<i>Thymus serpyllum</i> L.
Turmeric	<i>Curcuma longa</i> L.
Vanilla	<i>Vanilla planifolia</i> Andr. or <i>Vanilla tahitensis</i> J. W. Moore.
Zedoary	<i>Curcuma zedoaria</i> Rosc.

[42 FR 14640, Mar. 15, 1977, as amended at 43 FR 3705, Jan. 27, 1978; 44 FR 3963, Jan. 19, 1979; 50 FR 21044, May 22, 1985; 61 FR 14246, Apr. 1, 1996]

§ 182.20 Essential oils, oleoresins (solvent-free), and natural extractives (including distillates).

Essential oils, oleoresins (solvent-free), and natural extractives (including distillates) that are generally recognized as safe for their intended use, within the meaning of section 409 of the Act, are as follows:

Common name	Botanical name of plant source
Alfalfa	<i>Medicago sativa</i> L.
Allspice	<i>Pimenta officinalis</i> Lindl.
Almond, bitter (free from prussic acid)	<i>Prunus amygdalus</i> Batsch, <i>Prunus armeniaca</i> L., or <i>Prunus persica</i> (L.) Batsch.
Ambrette (seed)	<i>Hibiscus moschatus</i> Moench.
Angelica root	<i>Angelica archangelica</i> L.
Angelica seed	Do.
Angelica stem	Do.
Angostura (cusparia bark)	<i>Galipea officinalis</i> Hancock.
Anise	<i>Pimpinella anisum</i> L.
Asafoetida	<i>Ferula assa-foetida</i> L. and related spp. of <i>Ferula</i> .
Balm (lemon balm)	<i>Melissa officinalis</i> L.
Balsam of Peru	<i>Myroxylon perstirae</i> Klotzsch.
Basil	<i>Ocimum basilicum</i> L.

Common name	Botanical name of plant source
Bay leaves	<i>Laurus nobilis</i> L.
Bay (myrcia oil)	<i>Pimenta racemosa</i> (Mill.) J. W. Moore.
Bergamot (bergamot orange)	<i>Citrus aurantium</i> L. subsp. <i>bergamia</i> Wright et Am.
Bitter almond (free from prussic acid)	<i>Prunus amygdalus</i> Batsch, <i>Prunus amariaca</i> L., or <i>Prunus persica</i> (L.) Batsch.
Bois de rose	<i>Aniba rosaeodora</i> Ducke.
Cacao	<i>Theobroma cacao</i> L.
Camomile (chamomile) flowers, Hungarian	<i>Matricaria chamomilla</i> L.
Camomile (chamomile) flowers, Roman or English	<i>Anthemis nobilis</i> L.
Cananga	<i>Cananga odorata</i> Hook. f. and Thoms.
Capsicum	<i>Capsicum frutescens</i> L. and <i>Capsicum annuum</i> L.
Caraway	<i>Carum carvi</i> L.
Cardamom seed (cardamon)	<i>Elettaria cardamomum</i> Maton.
Carob bean	<i>Ceratonia siliqua</i> L.
Carrot	<i>Daucus carota</i> L.
Cascarilla bark	<i>Croton eluteria</i> Benn.
Cassia bark, Chinese	<i>Cinnamomum cassia</i> Blume.
Cassia bark, Padang or Batavia	<i>Cinnamomum burmanni</i> Blume.
Cassia bark, Saigon	<i>Cinnamomum loureirii</i> Nees.
Celery seed	<i>Apium graveolens</i> L.
Cherry, wild, bark	<i>Prunus serotina</i> Ehrh.
Chenille	<i>Anthriscus cerefolium</i> (L.) Hoffm.
Chicory	<i>Cichorium intybus</i> L.
Cinnamon bark, Ceylon	<i>Cinnamomum zeylanicum</i> Nees.
Cinnamon bark, Chinese	<i>Cinnamomum cassia</i> Blume.
Cinnamon bark, Saigon	<i>Cinnamomum loureirii</i> Nees.
Cinnamon leaf, Ceylon	<i>Cinnamomum zeylanicum</i> Nees.
Cinnamon leaf, Chinese	<i>Cinnamomum cassia</i> Blume.
Cinnamon leaf, Saigon	<i>Cinnamomum loureirii</i> Nees.
Citronella	<i>Cymbopogon nardus</i> Rendle.
Citrus peels	<i>Citrus</i> spp.
Clay (clay sage)	<i>Salvia sclarea</i> L.
Clover	<i>Trifolium</i> spp.
Coca (decoccalized)	<i>Erythroxylum coca</i> Lam. and other spp. of <i>Erythroxylum</i> .
Coffee	<i>Coffea</i> spp.
Cola nut	<i>Cola acuminata</i> Schott and Endl., and other spp. of <i>Cola</i> .
Coriander	<i>Coriandrum sativum</i> L.
Cumin (cumin)	<i>Cuminum cyminum</i> L.
Curacao orange peel (orange, bitter peel)	<i>Citrus aurantium</i> L.
Cuscuta bark	<i>Galipea officinalis</i> Hancock.
Dandelion	<i>Taraxacum officinale</i> Weber and T. laevigatum DC.
Dandelion root	Do.
Dog grass (quackgrass, triticum)	<i>Agropyron repens</i> (L.) Beauv.
Elder flowers	<i>Sambucus canadensis</i> L. and <i>S. nigra</i> L.
Estragole (esdragol, esdragon, tarragon)	<i>Artemisia dracunculus</i> L.
Estragon (tarragon)	Do.
Fennel, sweet	<i>Foeniculum vulgare</i> Mill.
Fenugreek	<i>Trigonella foenum-graecum</i> L.
Galanga (galangal)	<i>Alpinia officinarum</i> Hance.
Geranium	<i>Pelargonium</i> spp.
Geranium, East Indian	<i>Cymbopogon martinii</i> Stapf.
Geranium, rose	<i>Pelargonium graveolens</i> L'Her.
Ginger	<i>Zingiber officinale</i> Rosc.
Grapefruit	<i>Citrus paradisi</i> Macd.
Guava	<i>Psidium</i> spp.
Hickory bark	<i>Carya</i> spp.
Hoarhound (hoarhound)	<i>Marrubium vulgare</i> L.
Hops	<i>Humulus lupulus</i> L.
Horsemint	<i>Monarda punctata</i> L.
Hyssop	<i>Hyssopus officinalis</i> L.
Immortelle	<i>Helichrysum augustifolium</i> DC.
Jasmine	<i>Jasminum officinale</i> L. and other spp. of <i>Jasminum</i> .
Juniper (berries)	<i>Juniperus communis</i> L.
Kola nut	<i>Cola acuminata</i> Schott and Endl., and other spp. of <i>Cola</i> .
Laurel berries	<i>Laurus nobilis</i> L.
Laurel leaves	<i>Laurus</i> spp.
Lavender	<i>Lavandula officinalis</i> Chaix.
Lavender, spike	<i>Lavandula latifolia</i> Vill.
Lavandin	Hybrids between <i>Lavandula officinalis</i> Chaix and <i>Lavandula latifolia</i> Vill.
Lemon	<i>Citrus limon</i> (L.) Burm. f.
Lemon balm (see balm)	
Lemon grass	<i>Cymbopogon citratus</i> DC. and <i>Cymbopogon lexeus</i> Stapf.
Lemon peel	<i>Citrus limon</i> (L.) Burm. f.
Lime	<i>Citrus aurantifolia</i> Swingle.

Common name	Botanical name of plant source
Linden flowers	Tilia spp.
Locust bean	Ceratonia siliqua L.
Lupulin	Humulus lupulus L.
Mace	Myristica fragrans Houtt.
Mandarin	Citrus reticulata Blanco.
Marjoram, sweet	Majorana hortensis Moench.
Mate	Ilex paraguayensis St. Hil.
Melissa (see balm)	
Menthol	Mentha spp.
Menthyl acetate	Do.
Molasses (extract)	Saccharum officinarum L.
Mustard	Brassica spp.
Naranga	Citrus paradisi Macf.
Neroli, bigarade	Citrus aurantium L.
Nutmeg	Myristica fragrans Houtt.
Onion	Allium cepa L.
Orange, bitter, flowers	Citrus aurantium L.
Orange, bitter, peel	Do.
Orange leaf	Citrus sinensis (L.) Osbeck.
Orange, sweet	Do.
Orange, sweet, flowers	Do.
Orange, sweet, peel	Do.
Origanum	Origanum spp.
Palmarosa	Cymbopogon martinii Stapf.
Paprika	Capsicum annum L.
Parsley	Petroselinum crispum (Mill.) Mansf.
Pepper, black	Piper nigrum L.
Pepper, white	Do.
Peppermint	Mentha piperita L.
Peruvian balsam	Myroxylon perolae Klotzsch.
Pettigrain	Citrus aurantium L.
Pettigrain lemon	Citrus limon (L.) Burm. f.
Pettigrain mandarin or tangerine	Citrus reticulata Blanco.
Pimenta	Pimenta officinalis Lindl.
Pimenta leaf	Pimenta officinalis Lindl.
Pipsissewa leaves	Chimaphila umbellata Nutt.
Pomegranate	Punica granatum L.
Prickly ash bark	Xanthoxylum (or Zanithoxylum) Americanum Mill. or Xanthoxylum diversifolium L.
Rose absolute	Rosa alba L., Rosa centifolia L., Rosa damascena Mill., Rosa gallica L. and vars. of these spp.
Rose (otto of roses, attar of roses)	Do.
Rose buds	Do.
Rose flowers	Do.
Rose fruit (hips)	Do.
Rose geranium	Pelargonium graveolens L'Her.
Rose leaves	Rosa spp.
Rosemary	Rosmarinus officinalis L.
Saffron	Crocus sativus L.
Sage	Salvia officinalis L.
Sage, Greek	Salvia triloba L.
Sage, Spanish	Salvia lavandulifolia Vahl.
St. John's bread	Cerastium siliqua L.
Savory, summer	Satureia hortensis L.
Savory, winter	Satureia montana L.
Schinus molle	Schinus molle L.
Sloe berries (blackthorn berries)	Prunus spinosa L.
Spearmint	Mentha spicata L.
Spike lavender	Lavandula latifolia Vill.
Tamarind	Tamarindus indica L.
Tangerine	Citrus reticulata Blanco.
Tarragon	Artemisia dracunculifolia L.
Tea	Thea sinensis L.
Thyme	Thymus vulgaris L. and Thymus zygis var. gracilis Boiss.
Thyme, white	Do.
Thyme, wild or creeping	Thymus serpyllum L.
Triticum (see dog grass)	
Tuberose	Pollanthes tuberosa L.
Turneric	Curcuma longa L.
Vanilla	Vanilla planifolia Andr. or Vanilla tahitensis J. W. Moore.
Violet flowers	Viola odorata L.
Violet leaves	Do.
Violet leaves absolute	Do.
Wild cherry bark	Prunus serotina Ehrh.

Common name	Botanical name of plant source
Yang-ylang	Cananga odorata Hook. f. and Thoms.
Zedoary bark	Curcuma zedoaria Rosc.

[42 FR 14640, Mar. 15, 1977, as amended at 44 FR 3963, Jan. 19, 1979; 47 FR 29953, July 9, 1982; 48 FR 51613, Nov. 10, 1983; 50 FR 21043 and 21044, May 22, 1985]

§ 182.40 Natural extractives (solvent-free) used in conjunction with spices, seasonings, and flavorings.

Natural extractives (solvent-free) used in conjunction with spices,

seasonings, and flavorings that are generally recognized as safe for their intended use, within the meaning of section 409 of the Act, are as follows:

Common name	Botanical name of plant source
Apricot kernel (persic oil)	Prunus amniaca L.
Peach kernel (persic oil)	Prunus persica Sieb. et Zucc.
Peanut stearine	Arachis hypogaea L.
Persic oil (see apricot kernel and peach kernel).	
Quince seed	Cydonia oblonga Miller.

[42 FR 14640, Mar. 15, 1977, as amended at 47 FR 47375, Oct. 26, 1982]

§ 182.50 Certain other spices, seasonings, essential oils, oleoresins, and natural extracts.

Certain other spices, seasonings, essential oils, oleoresins, and natural ex-

tracts that are generally recognized as safe for their intended use, within the meaning of section 409 of the Act, are as follows:

Common name	Derivation
Ambergris	Physeter macrocephalus L.
Castoreum	Castor fiber L. and C. canadensis Kuhl.
Civet (zibeth, zibet, zibetum)	Civet cats, Viverra civetta Schreber and Viverra zibetha Schreber.
Cognac oil, white and green	Ethyl oenanthalate, so-called.
Musk (Tonquin musk)	Musk deer, Moschus moschiferus L.

§ 182.60 Synthetic flavoring substances and adjuvants.

Synthetic flavoring substances and adjuvants that are generally recognized as safe for their intended use, within the meaning of section 409 of the Act, are as follows:

Acetaldehyde (ethanal).
 Acetoin (acetyl methylcarbinol).
 Anethole (parapropenyl anisole).
 Benzaldehyde (benzoic aldehyde).
 N-Butyric acid (butanoic acid).
 d- or l-Carvone (carvol).
 Cinnamaldehyde (cinnamic aldehyde).
 Citral (2,6-dimethyloctadien-2,6-di-8, geranial, neral).
 Decanal (N-decylaldehyde, capraldehyde, capric aldehyde, caprinaldehyde, aldehyde C-10).
 Ethyl acetate.
 Ethyl butyrate.

3-Methyl-3-phenyl glycidic acid ethyl ester (ethyl-methyl-phenyl-glycidate, so-called strawberry aldehyde, C-16 aldehyde).

Ethyl vanillin.

Geraniol (3,7-dimethyl-2,6 and 3,8-octadien-1-ol).

Geranyl acetate (geraniol acetate).

Limonene (d-, l-, and dl-).

Linalool (linalol, 3,7-dimethyl-1,6-octadien-3-ol).

Linalyl acetate (bergamol).

Methyl anthranilate (methyl-2-aminobenzoate).

Piperonal (3,4-methylenedioxy-benzaldehyde, heliotropin).

Vanillin.

[42 FR 14640, Mar. 15, 1977, as amended at 43 FR 47724, Oct. 17, 1978; 44 FR 3963, Jan. 19, 1979; 44 FR 20656, Apr. 6, 1979; 48 FR 51907, Nov. 15, 1983; 54 FR 7402, Feb. 21, 1989]